QUALITY ASSURANCE REPORT/QUALITY CONTROL REPORT

		SE/QA/PR/ 210 /2022-23, DATE: 30/09/2023
Name of Work	:	Improvements and Restoration of Roads in Ward No. 05 (Package 01) (Package Consists of 6 works) Estimated cost 600.00 Lakhs
Job Code	:	005-23-000001
Bill No.& Amount	:	**3rd &Final Bill.Rs.51,89,624.00 (Including GST)**
Name of Agency	:	**Sri. K R Santosh Kumar**
Type of Test Performed	:	Bitumen Content and Gradation test as per Table 500.17 MoRTH V Revision.
Materials on which Tests Was Performed	:	1. Bituminous Concrete (Grade II)
Officers present during inspection	:	1. Sri. Mahantesh AE- Ward No 05 2. Sri .K.M.Yadukrishna AEE-Quality Assurance
Project Management Consultants	:	Civil Pro
Observations	:	➢ Bitumen content & Gradation test was conducted by Project Management Consultants representative at random locations in presence of AE(Ward No.05) along with AEE QA division. ➢ The Bitumen content & Gradation Test were conducted for BC (Grade-II). The readings and results are recorded by the PMC consultants. ➢ The readings of Bitumen Content & Gradation Test results are tabulated and analysis of test results done by PMC is here by furnished. ➢ The location wise test results are reproduced in the tables shown below.
Test Locations	:	**Location 1**: Venkateshwara Layout (Infront of Laxmi Venkateshwara nilaya, H.No 191, 5th Cross, Beside of H.No 100 3rd cross, Infront of H.No 100 Annalaxmi nilaya, mithuna apartment opp Road, Infront of Sri laxmi nivas # 115 3rd cross)

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Table-01: Bitumen Content and gradation Test Results for Venkateshwara Layout locations

BC- (GRADE-II)

Landmark/Location				
Description	Trial 1	Trail 2	Trail 3	Trail 4
1.Initial weight of sample (gms) w1	329	333	323	337
2. final weight of sample after extraction (gms) w2	313	317	307.5	320.5
3. Initial weight of filter paper (gms) w3	4	4	4	4
4. Final weight of filter paper (gms) w4	6	6	6	6
5.Increased weight of filter paper (gms) w5=(w4-w3)	2	2	2	2
6. Weight of Bitumen Extracted (gms). w6=w1-w2+w5	18	18	17.5	18.5
7. Bitumen content in % (w6/w1)x100	5.47	5.41	5.42	5.49
8.Average	5.45			

SIEVE SIZE mm	Trail 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cumulative Weight Retained	%Cumulative Retained	% Passing	
19.00	0	0	0.0	100.0	100
13.2	9	9	2.9	97.1	90-100
9.5	55	64	20.4	79.6	70-88
4.75	74	138	44.1	55.9	53-71
2.36	36	174	55.6	44.4	42-58
1.18	27	201	64.2	35.8	34-48
0.6	27	228	72.8	27.2	26-38
0.3	22	250	79.9	20.1	18-28
0.15	18	268	85.6	14.4	12-20
0.075	26	294	93.9	6.1	4-10

SIEVE SIZE mm	Trail 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cumulative Weight Retained	%Cumulative Retained	% Passing	
19.00	0	0	0.0	100.0	100
13.2	7	7	2.2	97.8	90-100
9.5	58	65	20.5	79.5	70-88
4.75	71	136	42.9	57.1	53-71
2.36	39	175	55.2	44.8	42-58
1.18	22	197	62.1	37.9	34-48
0.6	31	228	71.9	28.1	26-38
0.3	20	248	78.2	21.8	18-28
0.15	19	267	84.2	15.8	12-20
0.075	28	295	93.1	6.9	4-10

SIEVE SIZE mm	Trail 3				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cumulative Weight Retained	%Cumulative Retained	% Passing	
19.00	0	0	0.0	100.0	100
13.2	8	8	2.6	97.4	90-100
9.5	51	59	19.2	80.8	70-88
4.75	74	133	43.3	56.7	53-71
2.36	33	166	54.0	46.0	42-58
1.18	24	190	61.8	38.2	34-48
0.6	31	221	71.9	28.1	26-38
0.3	17	238	77.4	22.6	18-28
0.15	21	259	84.2	15.8	12-20
0.075	22.5	281.5	91.5	8.5	4-10

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SIEVE SIZE mm	Trail 4				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cumulative Weight Retained	%Cumulative Retained	% Passing	
19.00	0	0	0.0	100.0	100
13.2	6	6	1.9	98.1	90-100
9.5	53	59	18.4	81.6	70-88
4.75	76	135	42.1	57.9	53-71
2.36	38	173	54.0	46.0	42-58
1.18	29	202	63.0	37.0	34-48
0.6	28	230	71.8	28.2	26-38
0.3	24	254	79.3	20.7	18-28
0.15	20	274	85.5	14.5	12-20
0.075	19.5	293.5	91.6	8.4	4-10

Conclusion:

The file containing **3rd &Final bill** has been submitted for the above work to QA department on 13.09.2023 requesting for spot inspection. Engineers of QA/QC division have visited the work spot on 27.09.2023

PMC team was instructed to assess the strength of Gradation & Bitumen content test for BC (Grade-II) on Asphalted road . The Bitumen Content and Gradation Tests were conducted by PMC in presence of engineer in charge of work.

From the test results furnished by PMC, it is concluded that the results of the samples collected are in accordance with the standards/ specifications mention in the IRC codes. However, the results submitted by the PMC have been reproduced here with for further needful action. The results checked by QA/QC relates only for item tested in the particular location randomly.

Engineer in charge of work shall ensure that work executed as per this bill is not claimed in any other bill /work or else Engineer in charge of work shall be held responsible.

Further, QA/QC directs the Engineer in-charge of the work that all materials used for the work shall be inspected, tested and accepted as per the relevant specifications before incorporation in the work. The frequencies and methods of sampling and testing materials, including those required for definite purpose and not covered by MORT&H specifications shall be in accordance to the relevant IRC or BIS or AASHTO/ASTM/BS standards in order of priority.

All materials or work not conforming to the requirements of the specifications shall be considered unacceptable and rejected. The unacceptable materials or works that are rejected shall be immediately removed unless the defects are corrected and approved by the engineer in-charge of work.

The concerned Engineer in charge of the work shall follow the direction issued by Chief Commissioner Letter number dated 01.08.2022 and 14.09.2022 and take necessary action as appropriate in accordance with the law.

Note: -

This report by QA/QC is pertaining to the work carried out in **3rd & final bill** only. Safety precautions shall be taken at work spot to prevent any mishap, injuries or loss of life to general public and construction workers according to guidelines laid down in code of practices.

Engineer in charge of work and Agency shall ensure that if any damages or defects occur pertaining to the executed work within the Defect Liability period (DLP), The same shall be rectified immediately on top priority without fail.

Engineer in charge of work shall ensure that any changes/ modification/change in location in the sanctioned estimate to be got approved by competent authority.

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